

Bureau of Land Management, Interior

§ 3275.16

with the methods and procedures we approve (See 43 CFR 3275.17).

§ 3275.14 What aspects of my geothermal operations must I measure?

(a) For all well operations, you must measure wellhead flow, wellhead temperature, and wellhead pressure.

(b) For all electrical generation facilities, you must measure:

(1) Steam and/or hot water flow into the facility;

(2) Temperature of the water and/or steam into the facility;

(3) Pressure of the water and/or steam into the facility;

(4) Gross electricity generated;

(5) Net electricity at the facility tailgate;

(6) Electricity delivered to the sales point; and

(7) Temperature of the steam and/or hot water exiting the facility.

(c) For direct use facilities, you must measure:

(1) Flow of steam and/or hot water;

(2) Temperature into the facility; and

(3) Temperature out of the facility.

(d) We may also require additional measurements depending on the type of facility, the type and quality of the resource, and the terms of the sales contract.

§ 3275.15 How accurately must I measure my production and utilization?

It depends on whether you use the meter in calculating Federal production or royalty, and what quantity of resource you are measuring.

(a) For meters that you use to calculate Federal royalty:

(1) If the meter measures electricity, it must have an accuracy of $\pm 0.25\%$ or better of reading;

(2) If the meter measures steam flowing more than 100,000 lbs/hr on a monthly basis, it must have an accuracy of ± 2 percent or better of reading;

(3) If the meter measures steam flowing less than 100,000 lbs/hr on a monthly basis, it must have an accuracy of ± 4 percent or better of reading;

(4) If the meter measures water flowing more than 500,000 lbs/hr on a monthly basis, it must have an accuracy of ± 2 percent or better of reading;

(5) If the meter measures water flowing 500,000 lbs/hr or less on a monthly

basis, it must have an accuracy of ± 4 percent or better of reading;

(6) If the meter measures heat content, it must have an accuracy of ± 4 percent or better; or

(7) If the meter measures two phase flow at any rate, we will determine meter accuracy requirements. You must obtain our prior written approval before installing and using meters for two phase flow.

(b) Any meters that you do not use to calculate Federal royalty are considered production meters, which must maintain an accuracy of ± 5 percent or better of reading.

(c) We may modify these requirements as necessary to protect the interests of the United States.

§ 3275.16 What standards apply to installing and maintaining my meters?

(a) You must install and maintain all meters we require according to the manufacturer's recommendations and specifications or paragraphs (b) through (e) of this section, whichever is more restrictive.

(b) If you use an orifice plate to calculate Federal royalty, the orifice plate installation must comply with "API Manual of Petroleum Standards, Chapter 14, Section 3, part 2, Third Edition, February, 1991."

(c) For meters used to calculate Federal royalty, you must calibrate the meter against a known standard as follows:

(1) You must calibrate meters measuring electricity annually;

(2) You must calibrate meters measuring steam or hot water flow with a turbine, vortex, ultrasonics, or other linear devices, every six months, or as recommended by the manufacturer, whichever is more frequent; and

(3) You must calibrate meters measuring steam or hot water flow with an orifice plate, venturi, pitot tube, or other differential device, every month and you must inspect and repair the primary device (orifice plate, venturi, pitot tube) annually.

(d) You must use calibration equipment that is more accurate than the equipment you are calibrating.